

REMARKS

In this amendment, claims 1, 11, 12, 15, 16 and 26 are amended. Claims 1, 3, 6-16, 18 and 21-30 are pending. Reconsideration of this application, as amended, is requested.

This paper is in response to the final Office Action dated April 16, 2007. This amendment should be entered, at least because Applicants believe that this amendment and the remarks below will remove the rejections of that final Office Action, or, will at least place the application in better form for appeal. The claims have been amended to better clarify the structure of the claimed biosensors, in particular, the structure of the working electrode and the first conductive track, and of the electron transfer between various elements of the biosensor.

Claims 1 and 16 have been amended to better clarify that the working electrode comprises a conductive ink, at least one enzyme and at least one mediator. The language of the optional layer comprising (i) at least one enzyme and (ii) at least one mediator overlying the working electrode has been removed. Also, claims 1 and 16 have been amended to clarify that the first conductive track comprises the same conductive ink, the same at least one enzyme and the same at least one mediator as the working electrode. Still further, claims 1 and 16 have been amended to emphasize that electrons are transferred from the at least one enzyme directly to the at least one mediator to the working electrode.

Various dependent claims have been amended merely to change "said" to "the", to provide consistency in the claims.

102 Rejection

Claims 1, 3, 8 and 10 were rejected under 35 U.S.C. 102(b) as anticipated by Gilmartin. Applicants disagree.

As has been discussed by Applicants in prior papers, Gilmartin does not have an electrode or conductive track structure that allows electrons to transfer from the at least one enzyme directly to the at least one mediator and then to the working electrode. Instead, in Gilmartin, the enzyme generates hydrogen peroxide, that is then electrochemically oxidized at the electrode surface. This electrochemical oxidation is catalyzed by the metallo macrocyclic

compound (mediator). See, for example, FIG. 2 of Gilmartin. At least for this reason, Gilmartin does not anticipate any of claims 1, 3, 8 and 10. Withdrawal of the rejection is requested.

103 Rejections

Claims 1, 3, 6-16, 18 and 21-30 were rejected under 35 U.S.C. 103(a) as unpatentable over Feldman and Gilmartin, with or without Hedenmo et al. or Karube et al. Claims 1, 3, 10, 12, 13, 15 and 29 were rejected as unpatentable over Hughes in view of Gilmartin with Karube, and alternately in further view of Feldman with Hedenmo. Applicants disagree with both of these.

The independent claims, claims 1 and 16, require that the biosensor includes a working electrode and conductive track structure (comprising conductive ink, at least one enzyme and at least one mediator) that allows electrons to transfer from the at least one enzyme directly to the at least one mediator and then to the working electrode. There is no teaching or suggestion in either Feldman or Hughes of such an electrode and track structure, and there is no teaching or suggestion in any of Feldman, Gilmartin or Hughes of such an electron transfer process. In Gilmartin, the enzyme generates hydrogen peroxide, which is then electrochemically oxidized at the electrode surface. This electrochemical oxidation is catalyzed by the metallo macrocyclic compound. There is no direct electron transfer from the enzyme to the mediator. In Feldman, there is no teaching or suggestion of combining the enzyme and the mediator with the conductive ink.

The secondary references of Hedenmo and Karube, although they might discuss the transfer of electrodes from an enzyme to the mediator to the electrode, there is no suggestion in these that such a transfer would occur when the enzyme and mediator are present and mixed in with the conductive material that forms both the electrode and conductive track.

At least for these reasons, the various combinations of Feldman, Gilmartin, Hedenmo, Karube, and Hughes do not teach or suggest the biosensors of the pending claims. Withdrawal of the rejections is requested.

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Summary

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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